Ventilating building sheet batten

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Abstract of **NZ536129**

A ventilating and/or draining batten to be utilised as a spacer between timber framing and outer cladding in wall sections of the building elements, the batten being of a material selected from a plastic material, a non-moisture absorbing material or a non-moisture transmitting material and of an elongate strip like form of thickness of a desired set out distance, the batten having across its width transverse means whereby water can move through the strip like form.

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NEW ZEALAND
PATENTS ACT, 1953

PROVISIONAL SPECIFICATION

BATTENS

I, GRAEME BRUCE WEBSTER, a New Zealand citizen of 166 Oceanbeach Road, Mt Maunganui, New Zealand, do hereby declare this invention to be described in the following statement:

This invention relates to materials to be used in the construction of wall sections of residential and commercial buildings.

An object of the invention is to provide a better means reliant on batten usage of ventilating and draining wall cavities to reduce the risk of moisture being trapped or transferred in wall structures. Another object is the provision of such battens.

The present invention in one aspect relates to **a ventilating and/or draining batten** to be utilized as a spacer between timber framing and outer cladding in wall sections of buildings. The cavity drainage and ventilation system will preferably ensure a dry wall protecting the structural framing.

The batten is preferably of plastic or similar material, with perforations through the batten to enable air or water to flow through unobstructed.

Optionally one or more strips of plastic flute board forms the batten. A preferred configuration is to have three layers. The first layer has the flutes running across the batten, the second running lengthways and the third across, or vice versa.

The cavity between the building paper and outer cladding will drain water entering the cavity. Water will drain downward through the horizontal batten and out the bottom of the wall cavity. Warm air will also rise and pick up any residual moisture providing a dry vented environment.

All horizontal and vertical timber including top and bottom plates, studs and noggins would be fitted with triple opposing layer, strip flute board battens stapled to the timber framing. Flat sheet cladding could then be fastened through the batten to the studs and noggins at any point.

The flute board batten directly fastened to top plate, bottom plate, studs and noggins provide the passage for the air to flow vertically and horizontally through the cavities.

The batten can be installed around window and door framing to provide total support for external cladding. Window and doorframes will sit hard and flat against the cladding.

Because of the ability of the batten inherently to vent horizontally and vertically or for the batten to be used in different dispositions, air movement can vent the space between the window frame and the batten where water is most likely to penetrate. Areas above, below and beside windows and doors can vent sideways and upward.

The airflow however small will ventilate the cavity by passive convection. As the daytime air warms the wall, the air temperature in the cavity will also rise lowering the relative humidity. The warm air will rise and vent the cavity and pick up any moisture as it flows upward through the cavities to the eve.

The batten preferably has the ability to drain water to the same side of the cavity it started on i.e. not change from one side to the other. Water will flow downward through the batten and continue without ponding on the top or flowing to the other side, allowing the framing to stay dry.

The six layers of plastic that optionally form the layers of the fluted boards tightly seal any fastenings, whether nails or screws penetrating through the batten.

Moisture will not transfer from the outer cladding to the timber framing through the batten, as the plastic will not absorb or transmit moisture.

The present invention also consists in **a batten** to interpose between cladding and timber substrate [e.g. framing or other] elements, the batten being of a plastics material (and/or other non moisture absorbing and/or transmitting materials) and of an elongate strip like form of thickness of a desired set out distance, the batten having across its width means ("transverse means") (preferably defined by extrusion) whereby water can move through the strip like form.

Preferably the batten width is at least three times its thickness.

Optionally the transverse means is a plurality of channels.

Preferably the transverse means is a plurality of passageways.

The transverse means can be both.

The requirement for such transverse means to duct water (e.g. moisture) is accommodated by the crisscrossing of plastic fluted materials.

In another aspect the invention is **a batten of an elongate strip form**

wherein a precursor material has been extruded to define a sheet like material of the thickness of the batten with extrusion axis extending passageways,

and wherein the strip form axis has been defined by separation (e.g. cutting) into strip forms at least substantially transverse to the extrusion axis.

Preferably the extrusion has outside webs or sheets, optionally an interposed web or sheet, and web spacing bridges.

Another option is an extrusion in **a plastics material** that provides passageways and/or channels along the extrusion axis and the elongate length of the batten is less than or equal to the transverse extent of the extrusion, the width of the batten being provided by cutting or other strip forming transverse to the extrusion axis.

In another aspect the invention consists in **a batten** substantially as herein described with reference to any one or more of the accompanying drawings.

In still a further aspect the present invention consists in **the use of a batten** in accordance with any aspect of the present invention.

In still a further aspect the present invention consists in **a structure** which comprises or includes

a frame forming part of a building, a plurality of battens each in accordance with an aspect of the present invention, such battens being affixed to the framing directly or indirectly, and cladding spaced from the framing cladding the framing, the spacing being determined at least to some extent by said plurality of battens.

Preferably said battens are arrayed in such a way as to enable movement of moisture with either horizontally or vertically and/or by means of such movement.

In yet a further aspect the present aspect consists in **a structure** where the cladding is spaced from a frame in a manner substantially as herein described with reference to any one or more of the accompanying drawings.

This invention may also be said broadly to consist in the parts, elements and features referred to or indicated in the specification of the application, individually or collectively, and any or all combinations of any two or more of said parts, elements or features, and where specific integers are mentioned herein which have known equivalents in the art to which this invention relates, such known equivalents are deemed to be incorporated herein as if individually set forth.

Preferred forms of the present invention will now be described with reference to the accompanying drawings in which

Figure 1 is a perspective view of a batten in accordance with a first aspect of the present invention, said batten being formed from fluted plastics material (optionally three layers) arranged to allow both longitudinal and transverse passage, the batten having a longitudinal axis A-A,

Figure 2 shows a plastics batten having no passageways but having a plurality of channels on preferably both faces thereof and extending preferably orthogonally of the elongate axis A-A, and

Figure 3 is a diagram of a most preferred form of batten in accordance with the present invention, said batten having been cut from an extrusion that defines a plurality of passageways in the extrusion axis direction transverse to the elongate axis A-A.

This invention relates to materials used in the construction of wall sections of residential and commercial buildings. The object of the invention is to provide a better means

of ventilating and draining wall cavities to reduce the risk of moisture being trapped or transferred in wall structures.

The present invention forms a ventilating, draining, batten to be utilized as a spacer between timber framing and outer cladding in wall sections of buildings. The cavity drainage and ventilation system will ensure a dry wall protecting the structural framing.

The batten is of plastic or similar material, with perforations through the batten to enable air or water to flow through unobstructed.

Having one or more strips of plastic flute board forms the batten. The preferred configuration is to have three layers. The first layer has the flutes running across the batten, the second running lengthways and the third across.

The cavity between the building paper and outer cladding will drain water entering the cavity. Water will drain downward through the horizontal batten and out the bottom of the wall cavity. Warm air will also rise and pick up any residual moisture providing a dry vented environment.

All horizontal and vertical timber including top and bottom plates, studs and noggins would be fitted with triple opposing layer, strip flute board battens stapled to the timber framing. Flat sheet cladding could then be fastened through the batten to the studs and noggins at any point.

The flute board batten directly fastened to top plate, bottom plate, studs and noggins provide the passage for the air to flow vertically and horizontally through the cavities.

The batten can be installed around window and door framing to provide total support of external cladding. Window and doorframes will sit hard and flat against the cladding.

Because of the ability of the batten to vent horizontally and vertically, air movement can vent the space between the window frame and the batten where water is most likely to penetrate. Areas above, below and beside windows and doors can vent sideways and upward

The airflow however small will ventilate the cavity by passive convection. As the daytime air warms the wall, the air temperature in the cavity will also rise lowering the relative humidity. The warm air will rise and vent the cavity and pick up any moisture as it flows upward through the cavities to the eve.

The batten has the ability to draining water to the same side of the cavity it started on i.e. not change from one side to the other. Water will flow downward through the batten and

continue without ponding on the top or flowing to the other side, allowing the framing to stay dry.

The six layers of plastic that form the layers of the fluted boards tightly seal any fastenings, whether nails or screws penetrating through the batten.

Moisture will not transfer from the outer cladding to the timber framing through the batten, as the plastic will not absorb or transmit moisture.

In the preferred form of the present invention the batten is formed solely from plastics material, preferably polypropylene. Other plastics materials that can be used including polyethylenes, polyurethanes, etc.

A batten in accordance with an aspect of the present invention can be set either horizontally or vertically.

These battens are fixed by appropriate nailing or adhesive, or both. These serve as a spacer for the exterior cladding which can be of any suitable form (e.g. a James Hardie cladding product or other).

In a preferred form of the present invention the batten is as shown in Figure 3 as opposed to the layer of fluted plastics layers 1, 2 and 3 which together form the batten of Figure 1 or the single layer fluted medium 4 of Figure 2.

In the arrangements of each of Figures 1 and 2 the flute providing material 2 and 4 allows water movement transversely of the elongate axis AA of the batten whilst the gaps longitudinally in the form of the assemblage shown in Figure 1 allows water movement longitudinally as well.

The arrangement as shown in Figure 1 can be used both horizontally and vertically whilst that shown in Figure 2 is preferably used horizontally where vertical water flow is required and vertically where horizontal water flow is required. By water flow is meant movement between the preferably timber paper or equivalent covered frame and inside of the outer cladding whether or a cementitious, wood, steel, aluminium, plastics or other material.

The preferred form as shown in Figures 3 is extruded in the direction shown by the arrow thus to provide three spaced webs or sheets 5, 6 and 7 bridged by integrally moulded bridges 8 and 9.

Preferably the extrusion is sufficiently robust as to resist racking forces that might minimise the thickness during usage and/or handling.

Preferably also the material is such as to allow penetrative and/or adhesive fixing.

Preferably a backing as shown in Figure 3 is nailed in place and then subsequently has cladding nailed therethrough.

The arrangement shown in Figure 3 is used with its longitudinal backing axis AA horizontal where vertical moisture movement is required and vertical where horizontal movement is required.

Preferably the bridges 8 and 9 are in line and are normal to the webs 5, 6 and 7. In less preferred forms they can be staggered relative to each other and in still less preferred forms they can be angled with respect to the webs or some can be angled with respect to the webs and/or each other.

Angling is less desired notwithstanding it may improve racking resistance as it may allow a more ready water passage from one side to the other of the batten.

In the preferred form of the present invention the batten has the dimensions 45mm wide by 18mm thick by 1200mm long. Clearly alternatives to these proportions and absolute dimensions can be entertained. Currently the minimum spacing required under New Zealand law is 18mm and the incompressible nature of the preferred polypropylene extrusion is sufficient to meet that standard.

The manufacturing procedure is simply one of extruding sheets and thereafter transversely cutting or otherwise separating the extrusion into multiple batten lengths.

No restriction was placed on the length of each batten nor its thickness, nor its width.

Preferably the width of the batten is always greater than the thickness and preferably by a factor of about 2 or more.

Preferably the length of each batten is a multiple of the width of each batten and preferably greatly so, i.e. at least 20 times.

Advantages of some embodiments:

Ventilates horizontally when installed vertically

Ventilates vertically when installed horizontally

Drains water vertically and horizontally

Does not split when nailed or screwed at frequent centers

Total support of cladding around windows and doors while breathing up to aluminium frames

Seals around nails and screws on three layers stopping moisture tracking across the fixings

Total moisture barrier between outer cladding and framing

Water unable to track across batten

Reduces thermal conductivity between cladding and framing increasing R value of wall

High volume to mass ratio requiring less raw material

High compression strength

Supports back side of cladding when nailed or screwed stopping blowout

Vermin guard on top and bottom plates

Fire retardant added

Non toxic

Water resistant

Light weight

Totally recyclable

Can be made from mixture of recycled plastic

100 year plus life span

Comes cut to length

Easy to trim

Uniform thickness

No knots

Ease of manufacture, single extrusion

DATED THIS 10th DAY OF October 2005
AJ PARK
PER
AGENTS FOR THE APPLICANT

542948

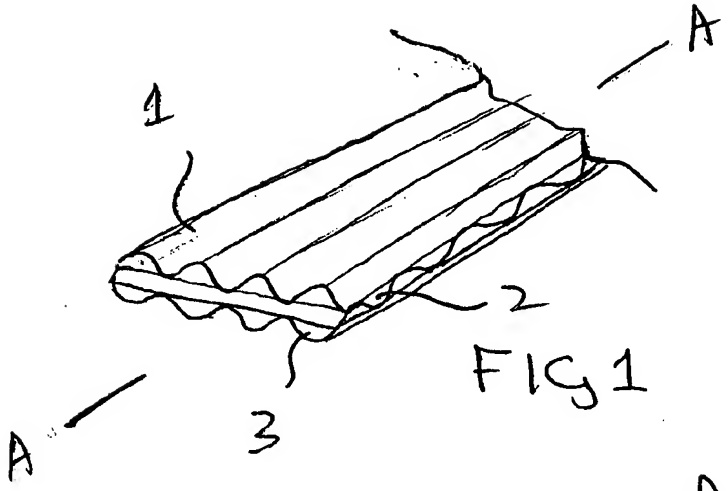

FIG 1

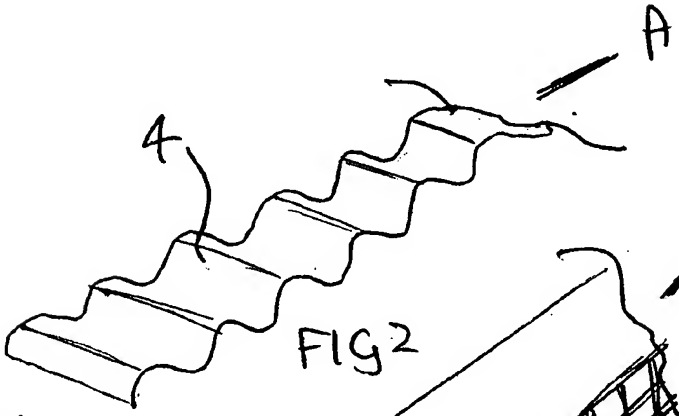

FIG 2

FIG 3

END

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PATENTS ACT, 1953

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Date: 26 October 2004/10 October 2005

COMPLETE SPECIFICATION

BATTENS

I, GRAEME BRUCE WEBSTER, a New Zealand citizen of 166 Oceanbeach Road, Mt Maunganui, New Zealand, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

This invention relates to materials to be used in the construction of wall sections of residential and commercial buildings.

The present invention recognises an advantage in wall cavity creation reliant on battens to set out cladding sheets, wall boards, or the like from the wall frame and preferably covered by a protective membrane. Such battens should have as an object an ability to allow moisture and air movement behind the cladding.

Another or alternative object of the invention is to provide a better means reliant on batten usage of ventilating and draining wall cavities to reduce the risk of moisture being trapped or transferred in wall structures. Another object is the provision of such battens.

The present invention in one aspect relates to **a ventilating and/or draining batten** to be utilized as a spacer between timber framing and outer cladding in wall sections of buildings. The cavity drainage and ventilation system will preferably ensure a dry wall protecting the structural framing.

The batten is preferably of plastic or similar material, but could be a metal (e.g. aluminium) with perforations or other form through the batten to enable air or water to flow through unobstructed.

Optionally one or more strips of plastic flute board forms the batten. A preferred configuration is to have three layers. The first layer has the flutes running across the batten, the second running lengthways and the third across, or vice versa.

The cavity between the building paper and outer cladding will drain water entering the cavity. Water will drain downward through the horizontal batten and out the bottom of the wall cavity. Warm air will also rise and pick up any residual moisture providing a dry vented environment.

All horizontal and vertical timber including top and bottom plates, studs and noggins would be fitted with triple opposing layer, strip flute board battens stapled to the timber framing. Flat sheet cladding could then be fastened through the batten to the studs and noggins at any point.

The flute board batten directly fastened to top plate, bottom plate, studs and noggins provide the passage for the air to flow vertically and horizontally through the cavities.

The batten can be installed around window and door framing to provide total support for external cladding. Window and doorframes will sit hard and flat against the cladding.

Because of the ability of the batten inherently to vent horizontally and vertically or for the batten to be used in different dispositions, air movement can vent the space between

the window frame and the batten where water is most likely to penetrate. Areas above, below and beside windows and doors can vent sideways and upward.

The airflow however small will ventilate the cavity by passive convection. As the daytime air warms the wall, the air temperature in the cavity will also rise lowering the relative humidity. The warm air will rise and vent the cavity and pick up any moisture as it flows upward through the cavities to the eve.

The batten preferably has the ability to drain water to the same side of the cavity it started on i.e. not change from one side to the other. Water will flow downward through the batten and continue without ponding on the top or flowing to the other side, allowing the framing to stay dry.

The six layers of plastic that optionally form the layers of the fluted boards tightly seal any fastenings, whether nails or screws penetrating through the batten.

Moisture will not transfer from the outer cladding to the timber framing through the batten, as the plastic will not absorb or transmit moisture.

The present invention also consists in **a batten** to interpose between cladding and timber substrate [e.g. framing or other] elements, the batten being of a plastics material (and/or other non moisture absorbing and/or transmitting materials) and of an elongate strip like form of thickness of a desired set out distance, the batten having across its width means ("transverse means") (preferably defined by extrusion) whereby water can move through the strip like form.

Preferably the batten width is at least three times its thickness.

Optionally the transverse means is a plurality of channels.

Preferably the transverse means is a plurality of passageways.

The transverse means can be both.

The requirement for such transverse means to duct water (e.g. moisture) is accommodated by the crisscrossing of plastic fluted materials.

In another aspect the invention is **a batten of an elongate strip form**

wherein a precursor material has been extruded to define a sheet like material of the thickness of the batten with extrusion axis extending passageways,

and wherein the strip form axis has been defined by separation (e.g. cutting) into strip forms at least substantially transverse to the extrusion axis.

Preferably the extrusion has outside webs or sheets, optionally an interposed web or sheet, and web spacing bridges.

Another option is an extrusion in **a plastics material** that provides passageways and/or channels along the extrusion axis and the elongate length of the batten is less than or equal to the transverse extent of the extrusion, the width of the batten being provided by cutting or other strip forming transverse to the extrusion axis.

In another aspect the invention consists in **a batten** substantially as herein described with reference to any one or more of the accompanying drawings.

In still a further aspect the present invention consists in **the use of a batten** in accordance with any aspect of the present invention.

In still a further aspect the present invention consists in **a structure** which comprises or includes

a frame forming part of a building, a plurality of battens each in accordance with an aspect of the present invention, such battens being affixed to the framing directly or indirectly, and cladding spaced from the framing cladding the framing, the spacing being determined at least to some extent by said plurality of battens.

Preferably said battens are arrayed in such a way as to enable movement of moisture with either horizontally or vertically and/or by means of such movement.

In yet a further aspect the present aspect consists in **a structure** where the cladding is spaced from a frame in a manner substantially as herein described with reference to any one or more of the accompanying drawings.

Preferred forms of the present invention will now be described with reference to the accompanying drawings in which

Figure 1 is a perspective view of a batten in accordance with a first aspect of the present invention, said batten being formed from fluted plastics material (optionally three layers) arranged to allow both longitudinal and transverse passage, the batten having a longitudinal axis A-A,

Figure 2 shows a plastics batten having no passageways but having a plurality of channels on preferably both faces thereof and extending preferably orthogonally of the elongate axis A-A, and

Figure 3 is a diagram of a most preferred form of batten in accordance with the present invention, said batten having been cut from an extrusion that defines a plurality of passageways in the extrusion axis direction which transverse to the elongate axis A-A,

Figure 4 shows a batten form made up of a criss-cross of different flute forms in plastic or a metal thereby to allow transverse as well as longitudinal air and/or moisture movement,

Figure 5 shows a moulded or stampable form (or even cut from an extrusion form) for a plastic or metal batten,

Figure 6 is a perspective view of a wall frame seated on a concrete foundation, the wall frame having been covered with a building paper or the equivalent membrane and thereafter having a fixed by stapling, nailing or the like a plurality of battens of a kind as depicted in Figure 3,

Figure 7 is the arrangement of Figure 6 showing upward and side ways air movement permitted by the passageways,

Figure 8 is the arrangement of Figure 6 and 7 showing the downward movement of moisture permitted by the passageways,

Figure 9 is a close up view of two studs on a building plate and showing the building paper or equivalent membrane interposed between the studs, the building plate and a plurality of battens of a kind as shown in Figure 3,

Figure 10 is a side elevation of the arrangement shown in Figure 9 showing a nail having been driven through and exterior cladding sheet through the batten and into the timber stud, and

Figure 11 shows a building structure of which a wall could be as in any one of Figures 6 to 10.

The present invention provides a better means of ventilating and draining wall cavities of residential and commercial buildings to reduce the risk of moisture being trapped or transferred in wall structures.

The present invention forms a ventilating and draining batten to be utilized as a spacer between timber framing and outer cladding in wall sections of buildings. The cavity drainage and ventilation system will ensure a dry wall protecting the structural framing.

The batten can be of plastic or similar material, with perforations through the batten or other transverse form to enable air or water to flow through unobstructed.

Figure 1 and 4 each show one or more strips of plastic flute board forming a batten. The preferred configuration is to have three layers. The first layer has the flutes running across the batten, the second running lengthways and the third across.

The cavity between the building paper and outer cladding will drain water entering the cavity. Water will drain downward through the horizontal batten and out the bottom of the wall cavity. Warm air will also rise and pick up any residual moisture providing a dry vented environment.

All horizontal and vertical timber including top and bottom plates, studs and noggins would be fitted with triple opposing layer, strip flute board battens stapled to the timber framing. Flat sheet cladding could then be fastened through the batten to the studs and noggins at any point.

The flute board batten directly fastened to top plate, bottom plate, studs and noggins provide the passage for the air to flow vertically and horizontally through the cavities.

The batten can be installed around window and door framing to provide total support of external cladding. Window and doorframes will sit hard and flat against the cladding.

Because of the ability of the batten to vent horizontally and vertically, air movement can vent the space between the window frame and the batten where water is most likely to penetrate. Areas above, below and beside windows and doors can vent sideways and upward

The airflow however small will ventilate the cavity by passive convection. As the daytime air warms the wall, the air temperature in the cavity will also rise lowering the relative humidity. The warm air will rise and vent the cavity and pick up any moisture as it flows upward through the cavities to the eve.

The batten has the ability to draining water to the same side of the cavity it started on i.e. not change from one side to the other. Water will flow downward through the batten and continue without ponding on the top or flowing to the other side, allowing the framing to stay dry.

The six layers of plastic that form the layers of the fluted boards tightly seal any fastenings, whether nails or screws penetrating through the batten.

Moisture will not transfer from the outer cladding to the timber framing through the batten, as the plastic will not absorb or transmit moisture.

In the preferred form of the present invention the batten is formed solely from plastics material, preferably polypropylene. Other plastics materials that can be used including polyethylenes, polyurethanes, etc. Metals such as aluminium, galvanised steel, etc. can also be contemplated.

A batten in accordance with an aspect of the present invention can be set either horizontally or vertically.

These battens are fixed by appropriate nailing or adhesive, or both. These serve as a spacer for the exterior cladding which can be of any suitable form (e.g. a James Hardie cladding product or other).

In a preferred form of the present invention the batten is as shown in Figure 3 as opposed to the layer of fluted plastics layers 1, 2 and 3 which together form the batten of Figure 1 or the single layer fluted medium 4 of Figure 2.

In the arrangements of each of Figures 1 and 2 the flute providing material 2 and 4 allows water movement transversely of the elongate axis AA of the batten whilst the gaps longitudinally in the form of the assemblage shown in Figure 1 allows water movement longitudinally as well.

The arrangement as shown in Figure 1 can be used both horizontally and vertically whilst that shown in Figure 2 is preferably used horizontally where vertical water flow is required and vertically where horizontal water flow is required. By water flow is meant movement between the preferably timber paper or equivalent covered frame and inside of the outer cladding whether or a cementitious, wood, steel, aluminium, plastics or other material.

The preferred form as shown in Figures 3 is extruded in the direction shown by the arrow thus to provide three spaced webs or sheets 5, 6 and 7 bridged by integrally moulded bridges 8 and 9.

Preferably the extrusion is sufficiently robust as to resist racking forces that might minimise the thickness during usage and/or handling.

Preferably also the material is such as to allow penetrative and/or adhesive fixing.

Preferably a backing as shown in Figure 3 is nailed in place and then subsequently has cladding nailed therethrough.

The arrangement shown in Figure 3 is used with its longitudinal backing axis AA horizontal where vertical moisture movement is required and vertical where horizontal movement is required.

Preferably the bridges 8 and 9 are in line and are normal to the webs 5, 6 and 7. In less preferred forms they can be staggered relative to each other and in still less preferred forms they can be angled with respect to the webs or some can be angled with respect to the webs and/or each other.

Angling is less desired notwithstanding it may improve racking resistance as it may allow a more ready water passage from one side to the other of the batten.

In the preferred form of the present invention the batten has the dimensions 45mm wide by 18mm thick by 1200mm long. Clearly alternatives to these proportions and absolute dimensions can be entertained. Currently the minimum spacing required under New Zealand law is 18mm and the incompressible nature of the preferred polypropylene extrusion is sufficient to meet that standard.

The manufacturing procedure is simply one of extruding sheets and thereafter transversely cutting or otherwise separating the extrusion into multiple batten lengths.

No restriction was placed on the length of each batten nor its thickness, nor its width.

Preferably the width of the batten is always greater than the thickness and preferably by a factor of about 2 or more.

Preferably the length of each batten is a multiple of the width of each batten and preferably greatly so, i.e. at least 20 times.

Figure 9 shows a foundation, for example, of concrete 10 having a timber building plate 11 seated thereon in an appropriate rebate (preferably on a building paper or the equivalent membrane) and supporting upstanding therefrom a plurality of studs 12. Over the studs 12 but not over the opening 13 is positioned a building paper or the equivalent membrane 14 and it is through this that a plurality of battens 15 and 16 are fixed by stapling, nailing or the like prior to an exterior cladding 17 being overlaid over the battens 15 and 16 and nailed. As can be seen in Figure 9 the nail 18 is capable of being driven through the batten 16 into the stud 12 if desired.

With the arrangement depicted in Figures 6 through 10, notwithstanding the overlying cladding 17 (not shown in Figures 6 through 9), air movement as depicted by the arrows in Figure 7 is possible. Such air movement can carry with it moisture. As shown in Figure 8 by the arrows, a downward movement of moisture is also permitted.

Such structures as in Figures 6 through 10 can form part of a building as shown in Figure 11.

Advantages of some embodiments:

Ventilates horizontally when installed vertically

Ventilates vertically when installed horizontally

Drains water vertically and horizontally

Does not split when nailed or screwed at frequent centers

Total support of cladding around windows and doors while breathing up to aluminium frames

Seals around nails and screws on three layers stopping moisture tracking across the fixings

Total moisture barrier between outer cladding and framing

Water unable to track across batten

Reduces thermal conductivity between cladding and framing increasing R value of wall

High volume to mass ratio requiring less raw material

High compression strength

Supports back side of cladding when nailed or screwed stopping blowout

Vermin guard on top and bottom plates

Fire retardant added

Non toxic

Water resistant

Light weight

Totally recyclable

Can be made from mixture of recycled plastic

100 year plus life span

Comes cut to length

Easy to trim

Uniform thickness

No knots

Ease of manufacture, single extrusion

WHAT I CLAIM IS:

1. **A batten** to interpose between cladding and timber substrate [e.g. framing or other] elements, the batten being of a material selected from a plastics material, a non moisture absorbing material and a non moisture transmitting material and of an elongate strip like form of thickness of a desired set out distance, the batten having across its width means ("transverse means") whereby water can move through the strip like form.

2. A batten of claim 1 of a plastics material.

3. A batten of claim 1 or 2 wherein the transverse means is of an extrudable nature.

4. A batten of any one of claims 1 to 3 wherein the batten width is at least three times its thickness.

5. A batten of any one of claims 1 to 4 wherein the transverse means is or includes a plurality of channels.

6. A batten of any one of claims 1 to 5 wherein the transverse means is or includes a plurality of passageways.

7. A batten of claim 1 wherein said transverse means to duct water (e.g. moisture) is provided by the crisscrossing of plastic fluted materials.

8. A batten of claim 1 wherein fluted plastics material or plastic flute containing material, or both, provides passageways across the width of the batten.

9. A batten of claim 8 having three layers of such material or materials.

10. **A batten of an elongate strip form**

wherein a precursor material has been extruded to define a sheet like material of the thickness of the batten with extrusion axis extending passageways,

and wherein the strip form axis has been defined by separation (e.g. cutting) into strip forms at least substantially transverse to the extrusion axis.

11. A batten of claim 10 wherein the extrusion has extrusion defined outside webs or sheets and web spacing bridges.

12. A batten of claim 11 wherein there is an extrusion defined interposed web or sheet between the outside webs or sheets.

13. A batten of any one of the preceding claims derived from an extrusion in a plastics material that provides passageways and/or channels along the extrusion axis and the elongate length of the batten is less than or equal to the transverse extent of the extrusion, the width of the batten being provided by cutting or other strip forming transverse to the extrusion axis.

14. **A batten** substantially as hereinbefore described with reference to any one or more of the accompanying drawings.

15. **The use of a batten** in accordance with any one of claim 1 to 13 in a manner substantially as hereinbefore described with reference to any one or more of the accompanying drawings.

16. **A structure** which comprises or includes

a frame forming part of a building,

a plurality of battens each in accordance with any one of claims 1 to 14 such battens being affixed to the framing directly or indirectly, and

cladding spaced from the framing cladding the framing, the spacing being determined at least to some extent by said plurality of battens.

17. A structure of claim 16 wherein said battens are arrayed in such a way as to enable movement of moisture with either horizontally or vertically and/or by means of such movement.

18. A structure of claim 16 or 17 when each batten is nailed, pinned or stapled in place.

19. **A structure** where the cladding is spaced from a frame in a manner substantially as hereinbefore described with reference to any one or more of the accompanying drawings.

20. **A building** having a structure of any one of claims 16 to 19.

DATED THIS 16th DAY OF November 2005
AJ PARK
PER
AGENTS FOR THE APPLICANT

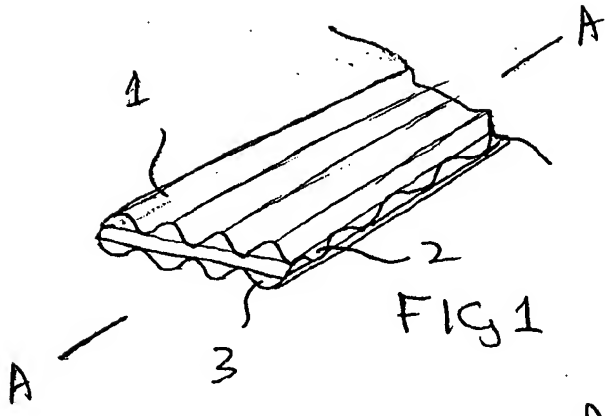

FIG 1

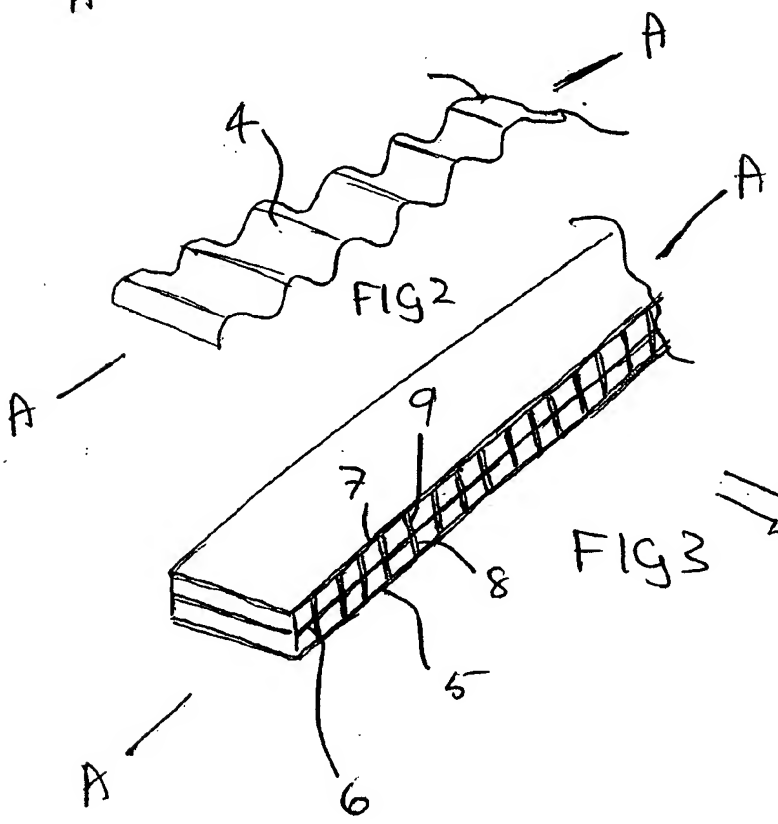

FIG 2

FIG 3

FIG 11

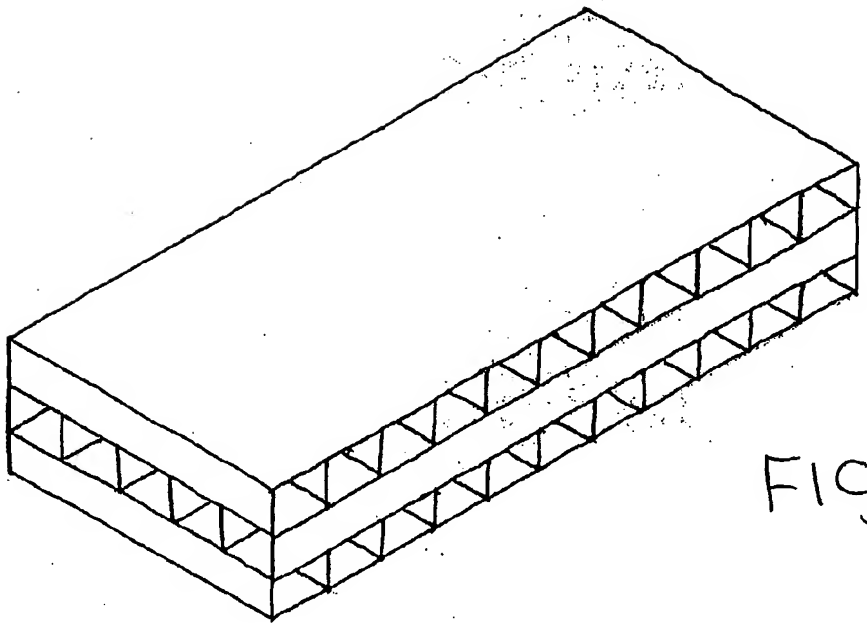

FIG 4

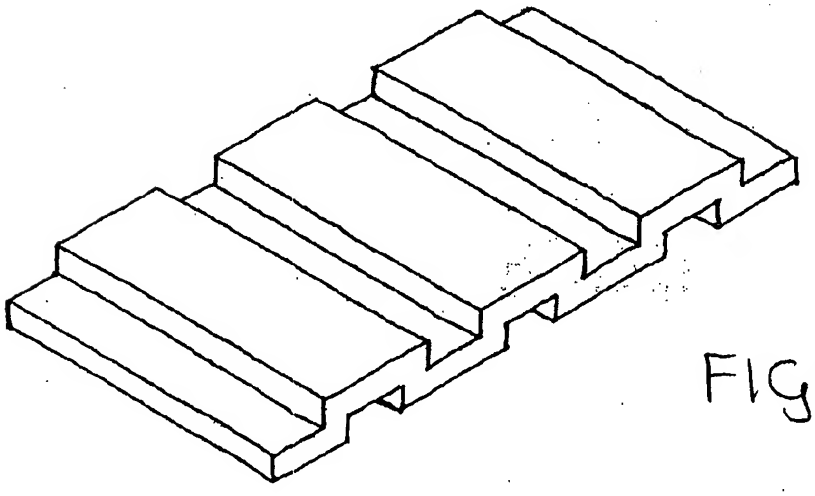

FIG 5

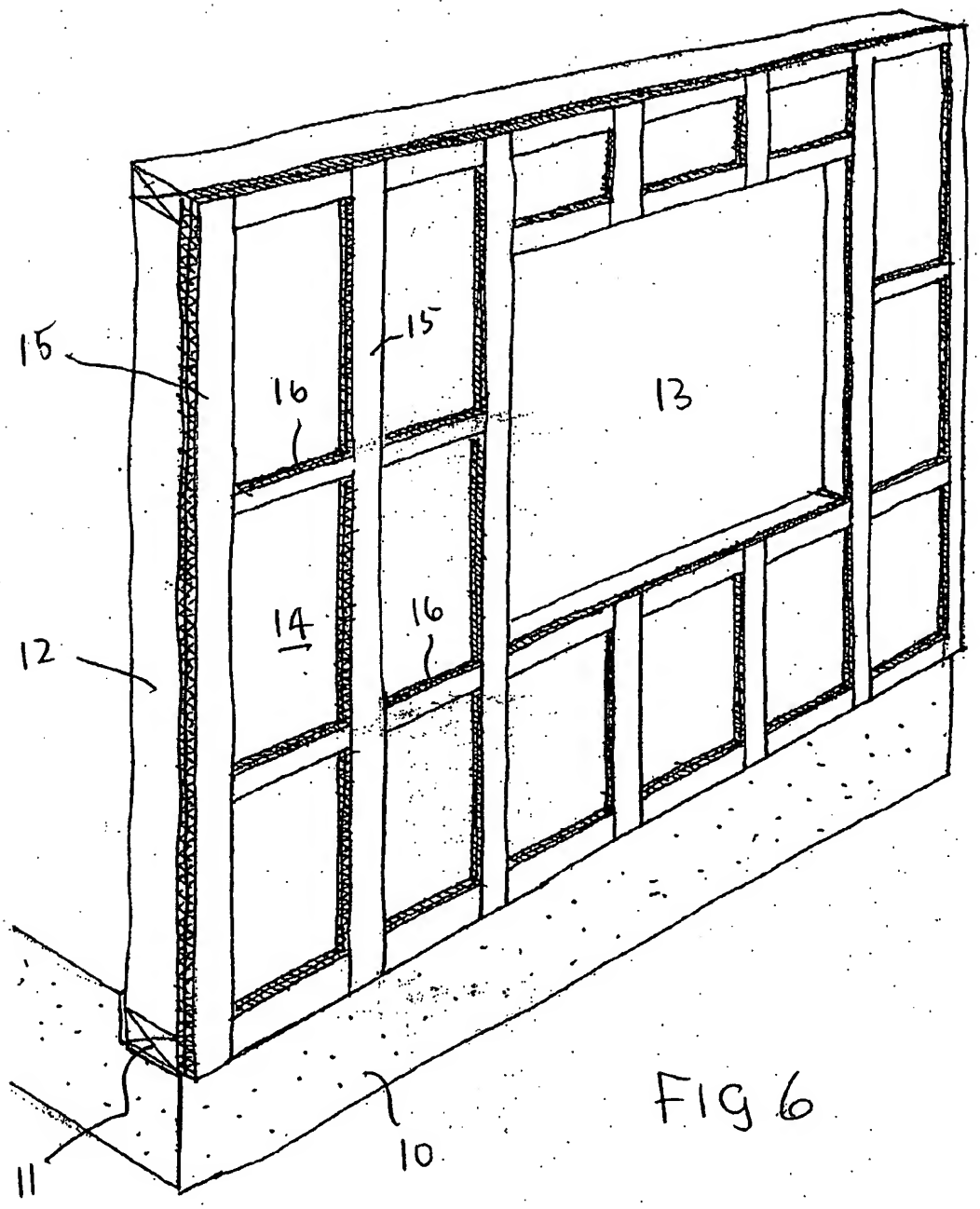

Fig 6

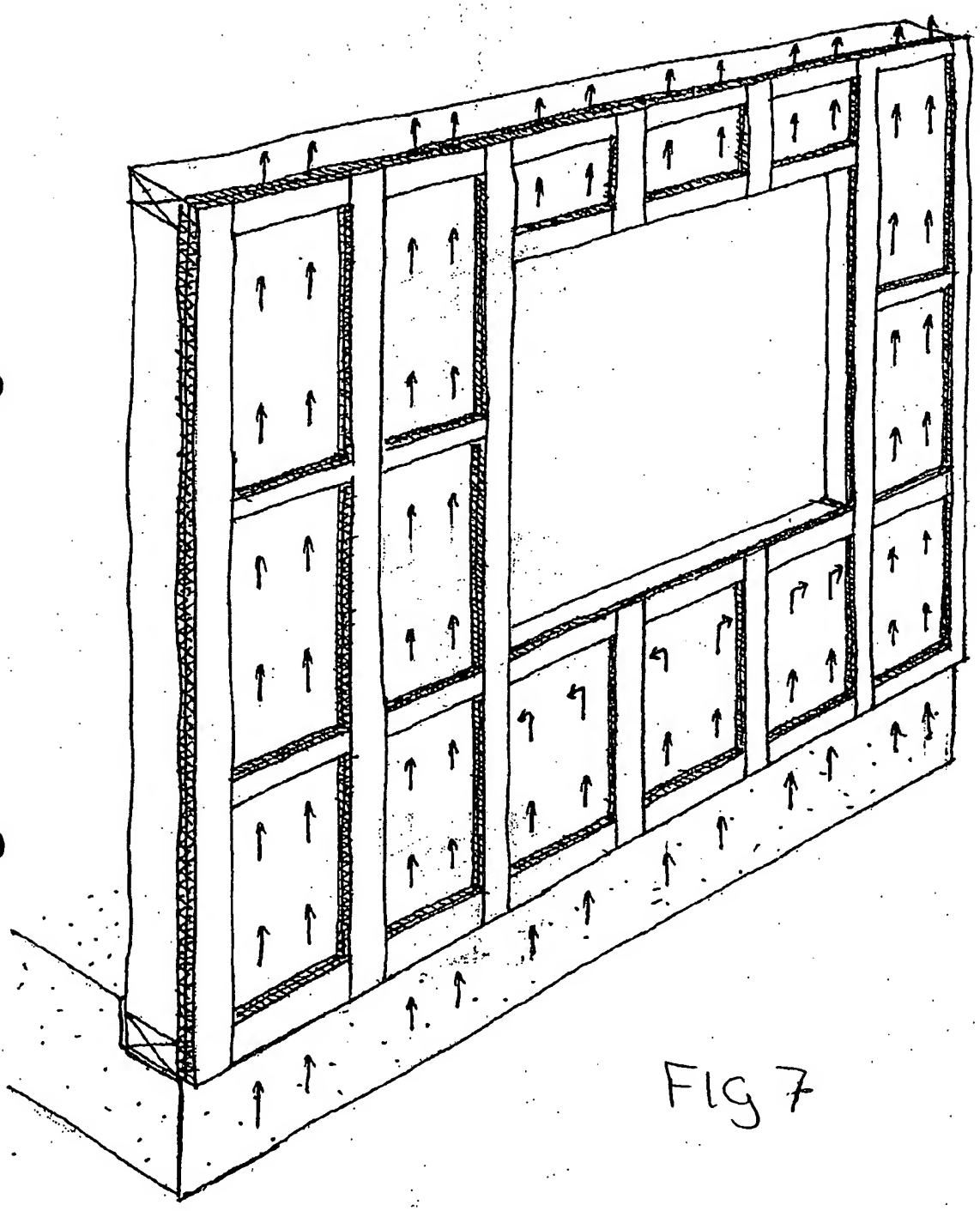

Fig 7

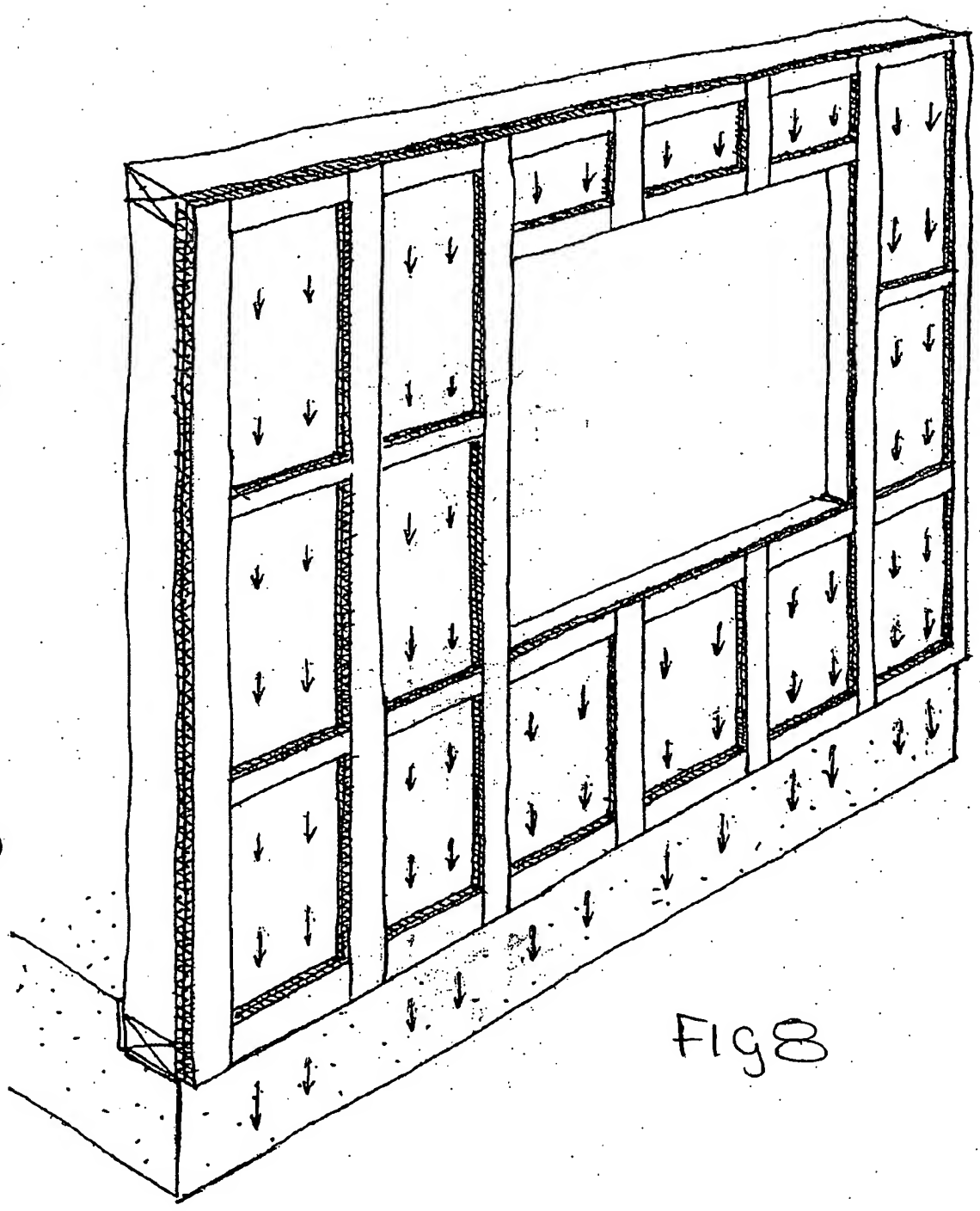

Fig8

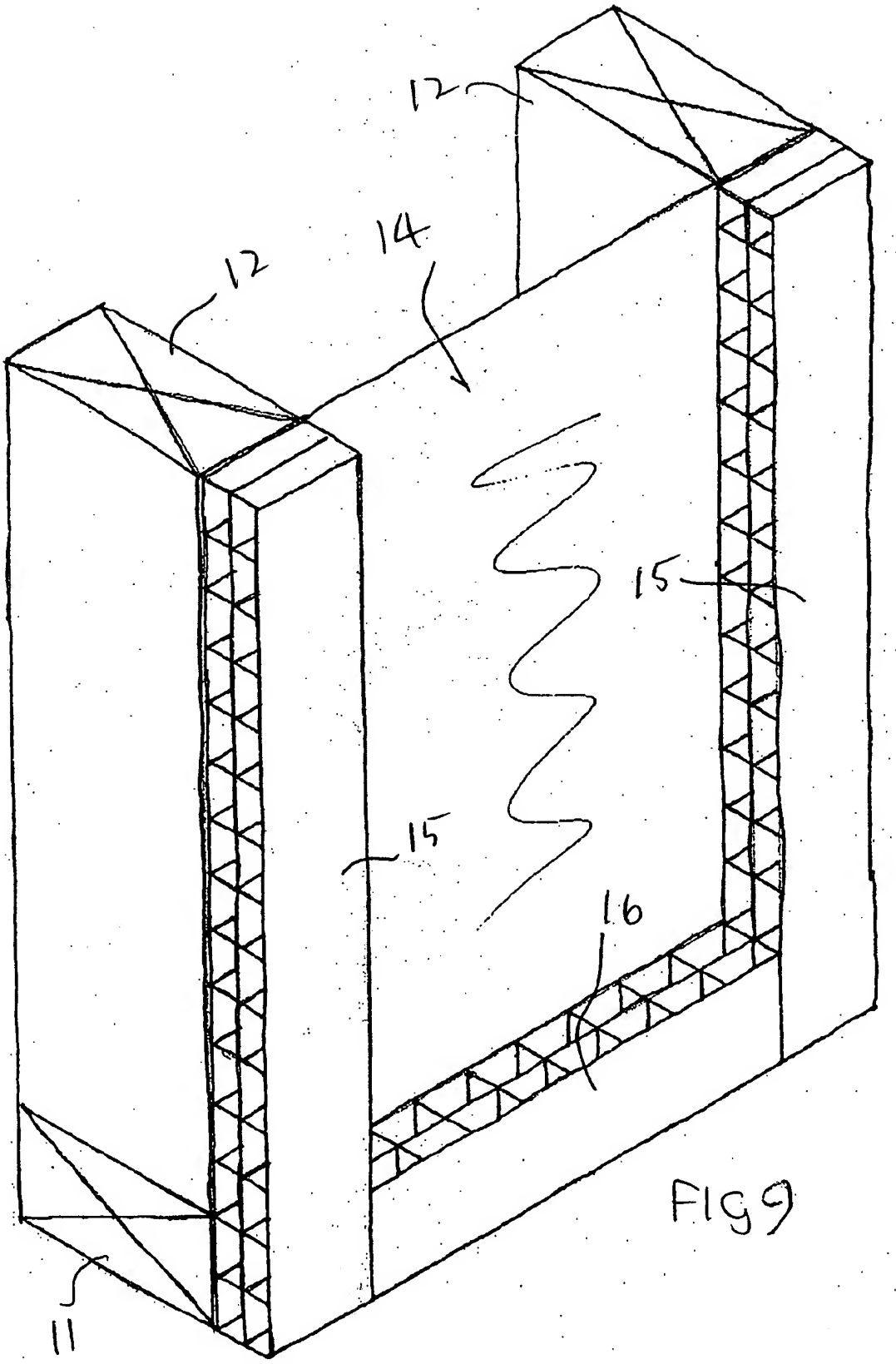

Fig 9

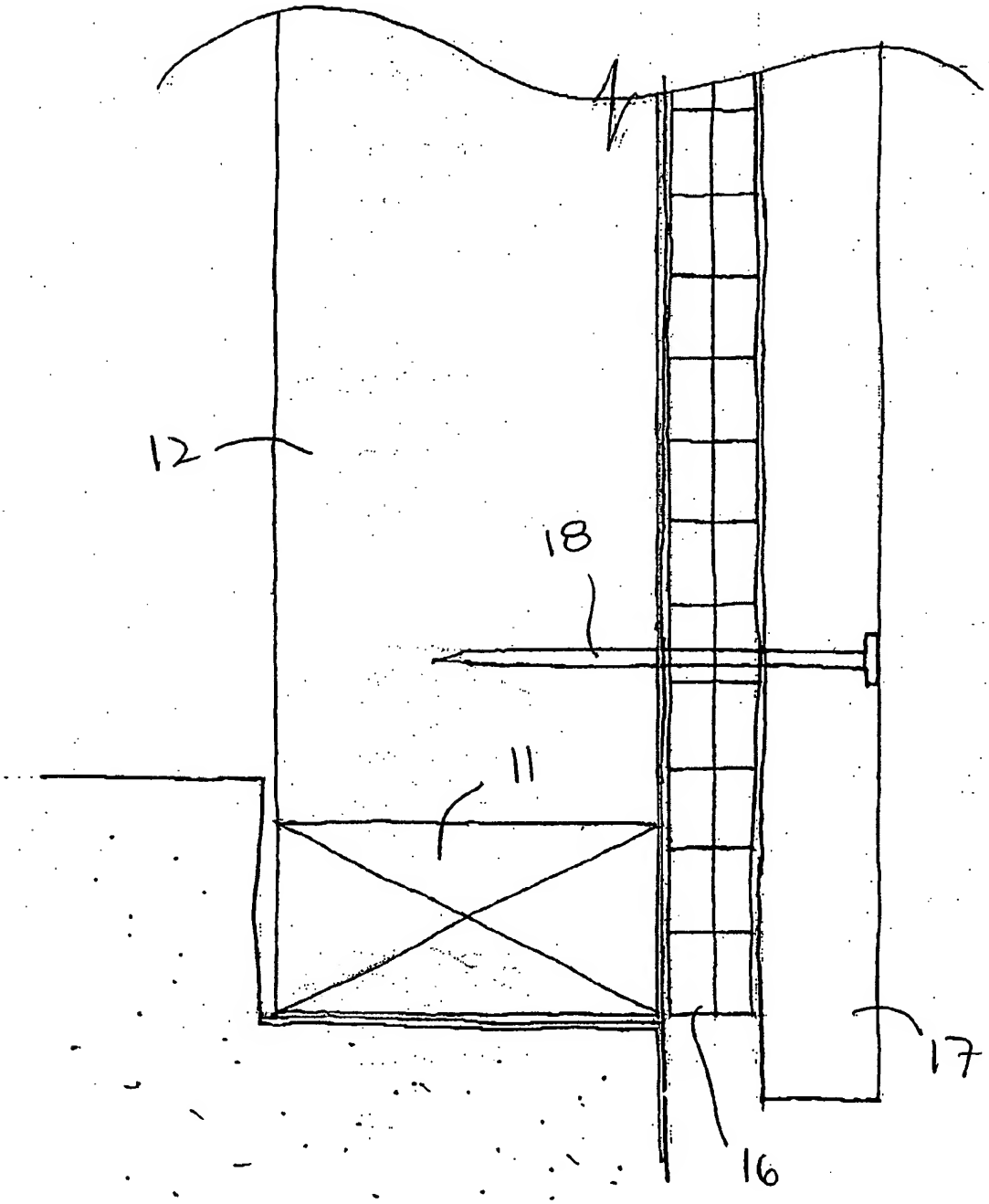

Fig 10